

PARTIAL COVERAGE RESTORATIONS



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PROSTHODONTICS

- ❑ DEF: extra coronal metallic restoration covering most of the clinical crown, leaving some part unprepared and retained by grooves or pins.
- ❑ ADV: conservative, good marginal accessibility, reasonable esthetics, complete seating during cementation and pulp testing can be done.
- ❑ DIS-ADV: difficult preparation, some metallic display, extensive margins liable to cavitation.

❑ IND: bridge retainer

individual retainer



sound teeth or with minimal restoration

teeth with good occluso-gingival height

teeth with good mesio-distal width

teeth with good axial inclination

very good oral hygiene and caries index

❑ CONTRA-IND:



short teeth

thin teeth

rotated, tilted and malposed teeth

teeth with large restorations/ cavitation

patients with high caries index/poor OH

teeth with defective buccal surfaces

TYPES OF PARTIAL COVERAGE RESTORATIONS



❑ RETAINED BY GROOVES:

$\frac{3}{4}$ crown : universal

Modified $\frac{3}{4}$ crown (reverse): lower premolars

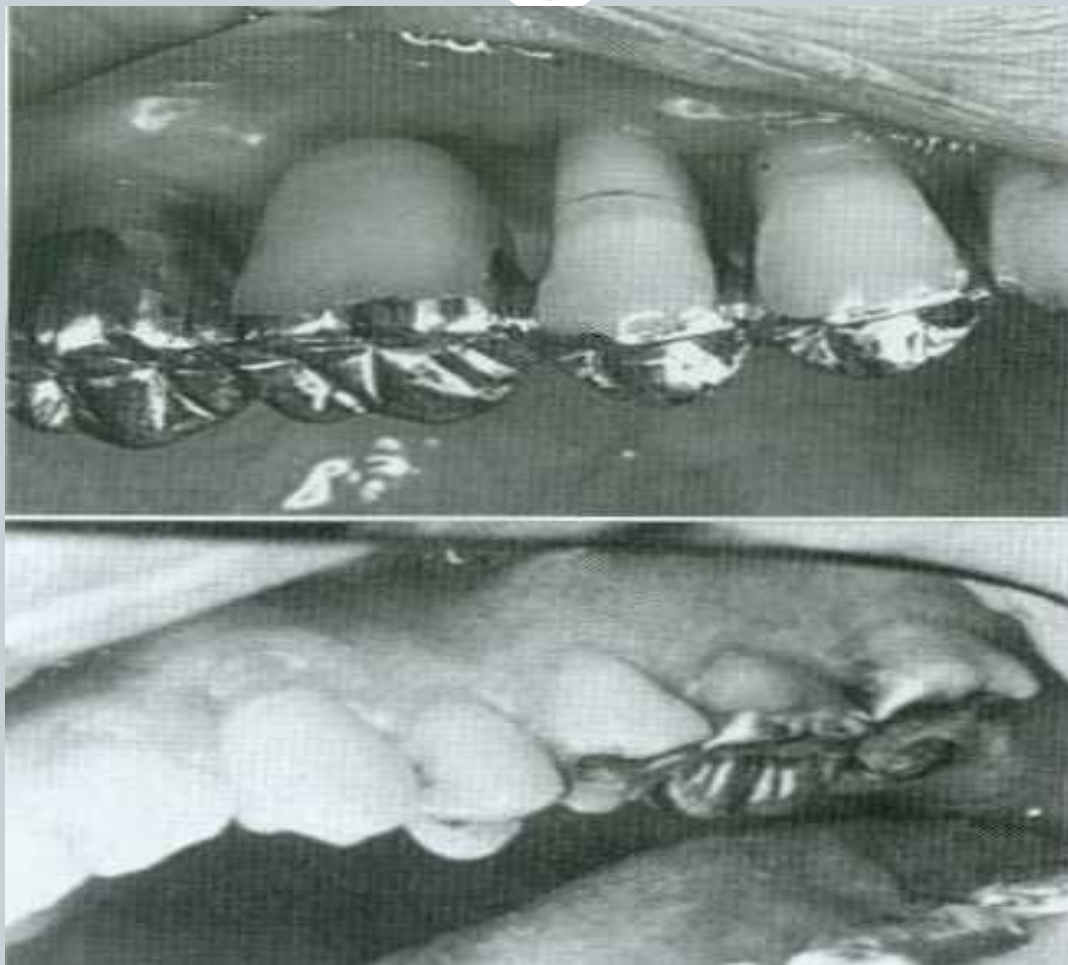
McBoyle crown: lower anterior

$\frac{1}{2}$ crown: lower molar

$\frac{7}{8}$ crown: upper molar

❑ RETAINED BY PINS:

Pin ledge retainer (3 pins, 2 incisal and 1 or 2 cervical)
upper anterior teeth



TYPES OF GROOVES



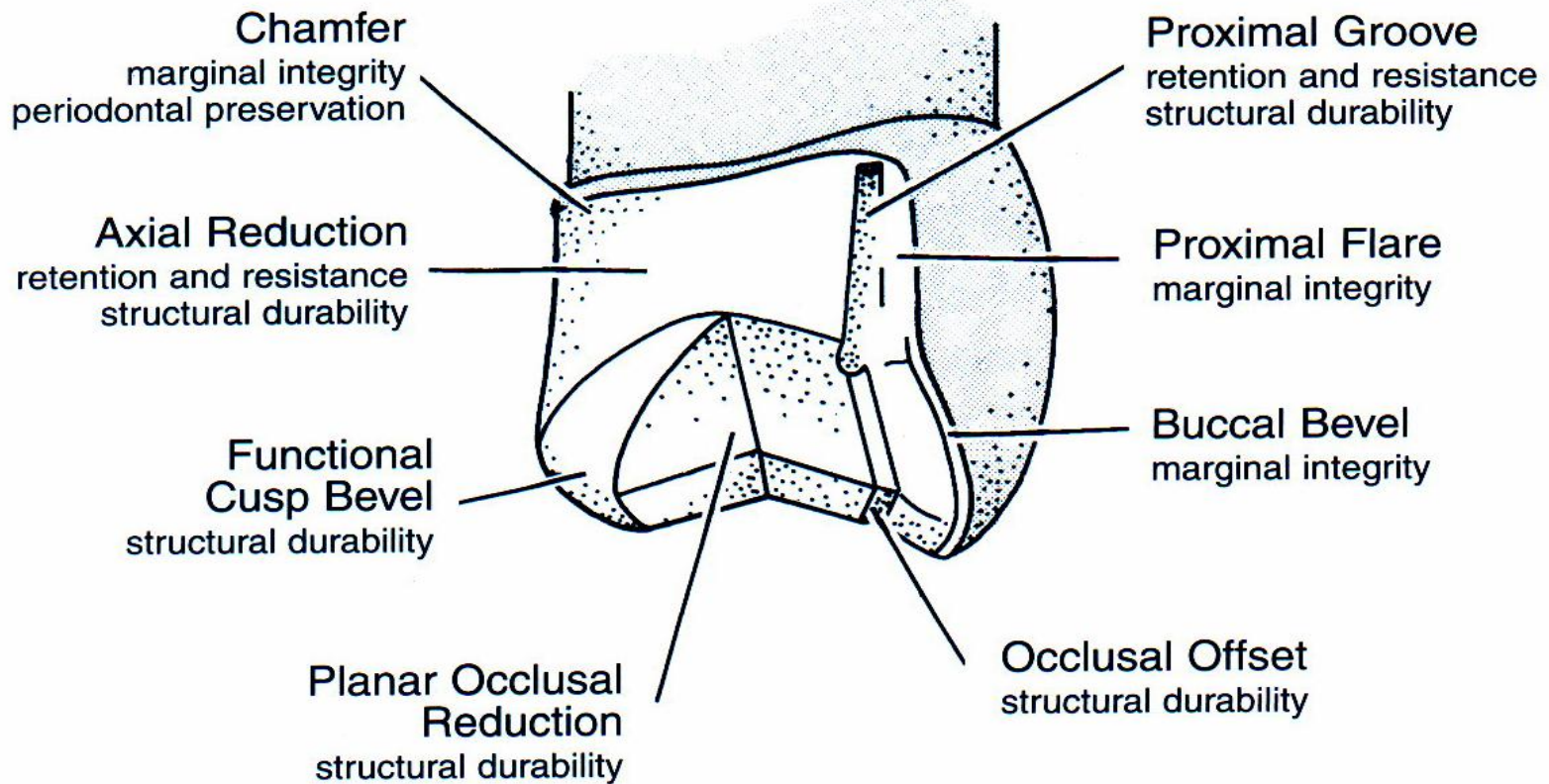
- ❑ V SHAPED GR: used in ant region
- ❑ U SHAPED GR: most commonly used
- ❑ BOX SHAPED GR: used when there is prox caries or existing restoration

THREE QUARTER CROWN

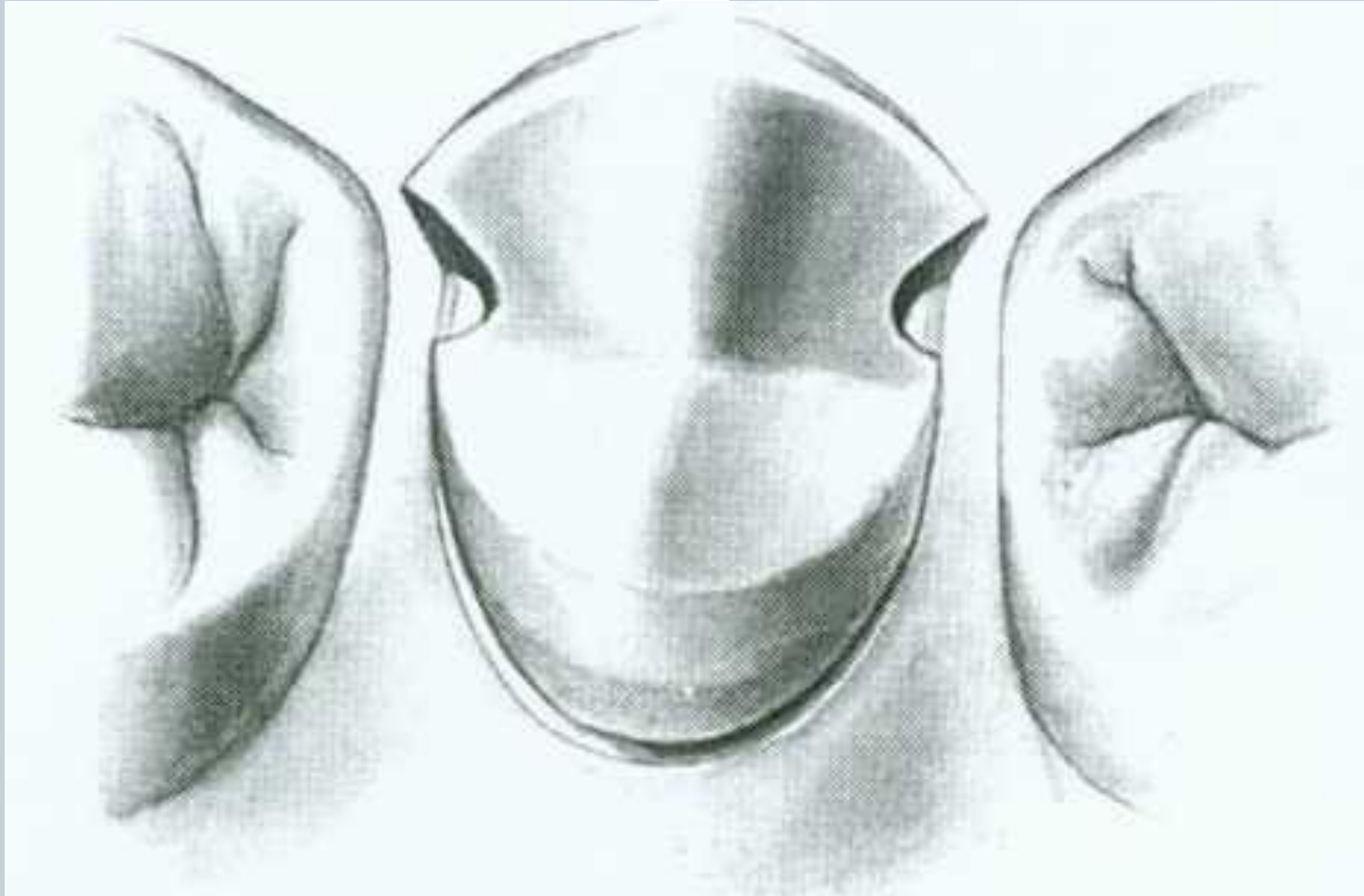


- ❑ Leaves the facial surface unprepared for esthetic reasons
- ❑ Metal should not extend beyond the bucco-proximal line angle or the bucco-occlusal line angle
- ❑ Finish line is chamfer
- ❑ Grooves should be prepared parallel to each other and with slight occlusal convergance (using a tapered fissure bur)
- ❑ Grooves placed in half of the buccal half
- ❑ Flaring is done to remove undermined enamel

3/4 crown preparation



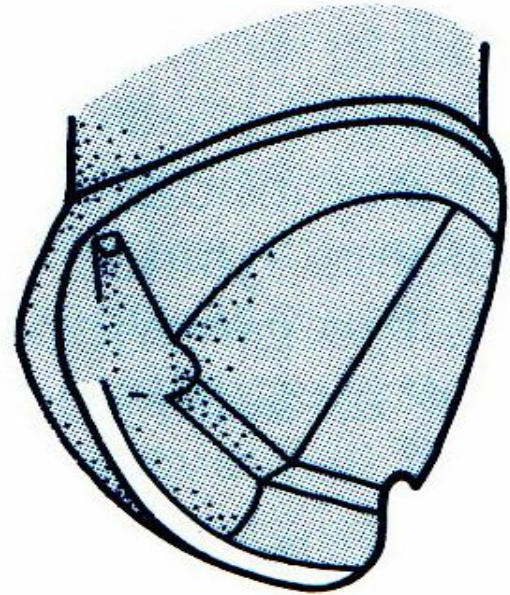
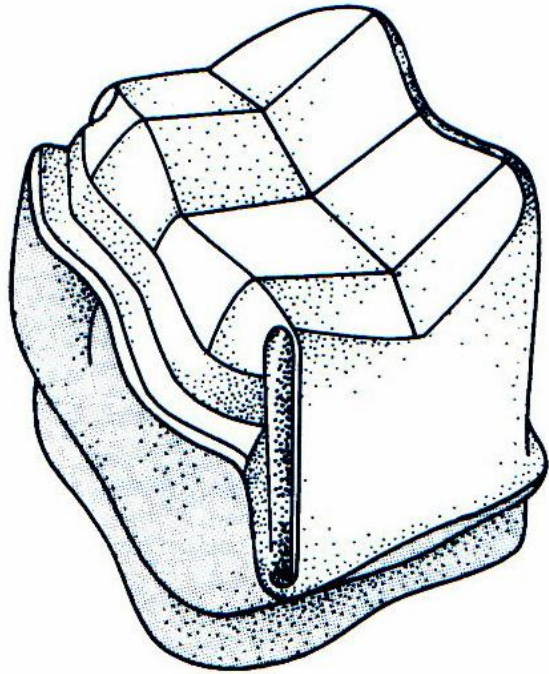
Typical prep of $\frac{3}{4}$ crown





- ❑ The floor of the groove is not at the same level of the finish line
- ❑ Occlusal offset
- ❑ Mandibular premolars and molars have their buccal cusps covered
- ❑ In reverse $\frac{3}{4}$ the unprepared surface is the lingual
- ❑ In maxillary $\frac{3}{4}$ the grooves are parallel to the incisal $\frac{2}{3}$ of the labial surface
- ❑ Grooves are deep at the incisal and become shallower as it moves cervically (no floor)

Posterior and Anterior preps



Half Crown



- ❑ Modification of three quarter
- ❑ Has half the buccal and lingual surfaces reduced
- ❑ Mesial surface completely prepared
- ❑ The occlusal fissure and pit system prepared
- ❑ Grooves are placed buccally and lingually, addition groove can be placed in mesial
- ❑ Mostly used with tilted lower molars

McBoyle Retainer



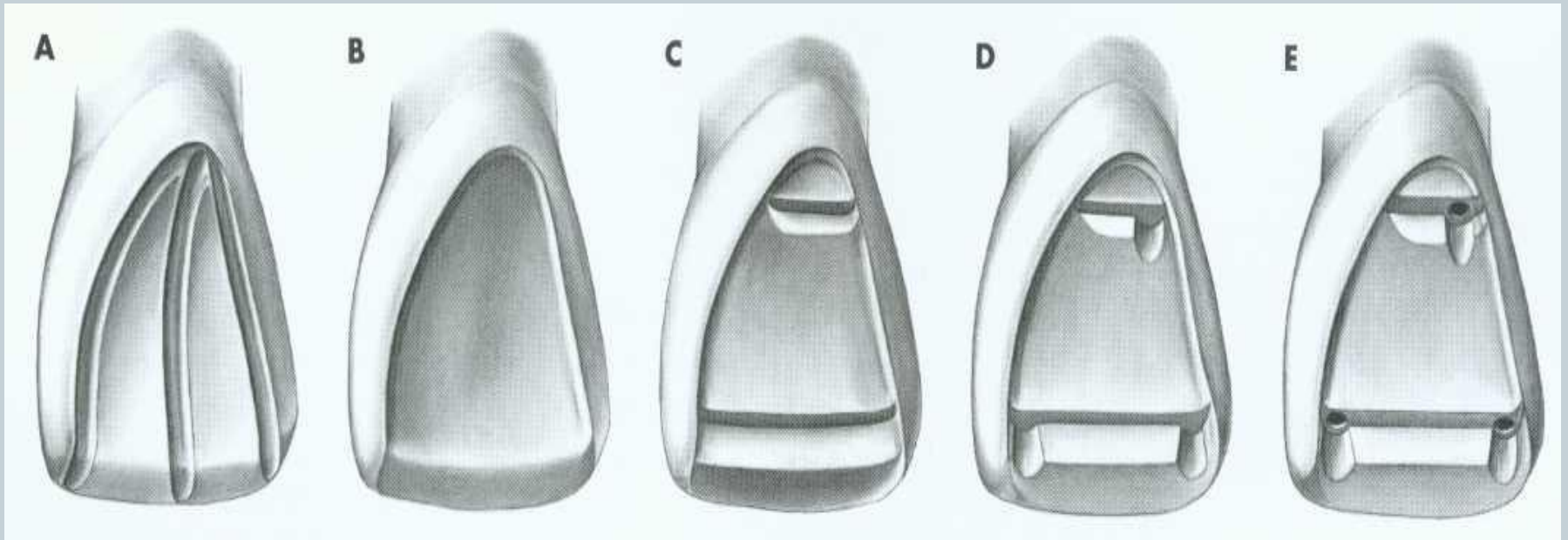
- ❑ Modification of the $\frac{3}{4}$
- ❑ Reduces the incisal edge
- ❑ Grooves are present in the labio-proximal line angles
- ❑ Unaesthetic display of metal

Pin Ledge Retainer

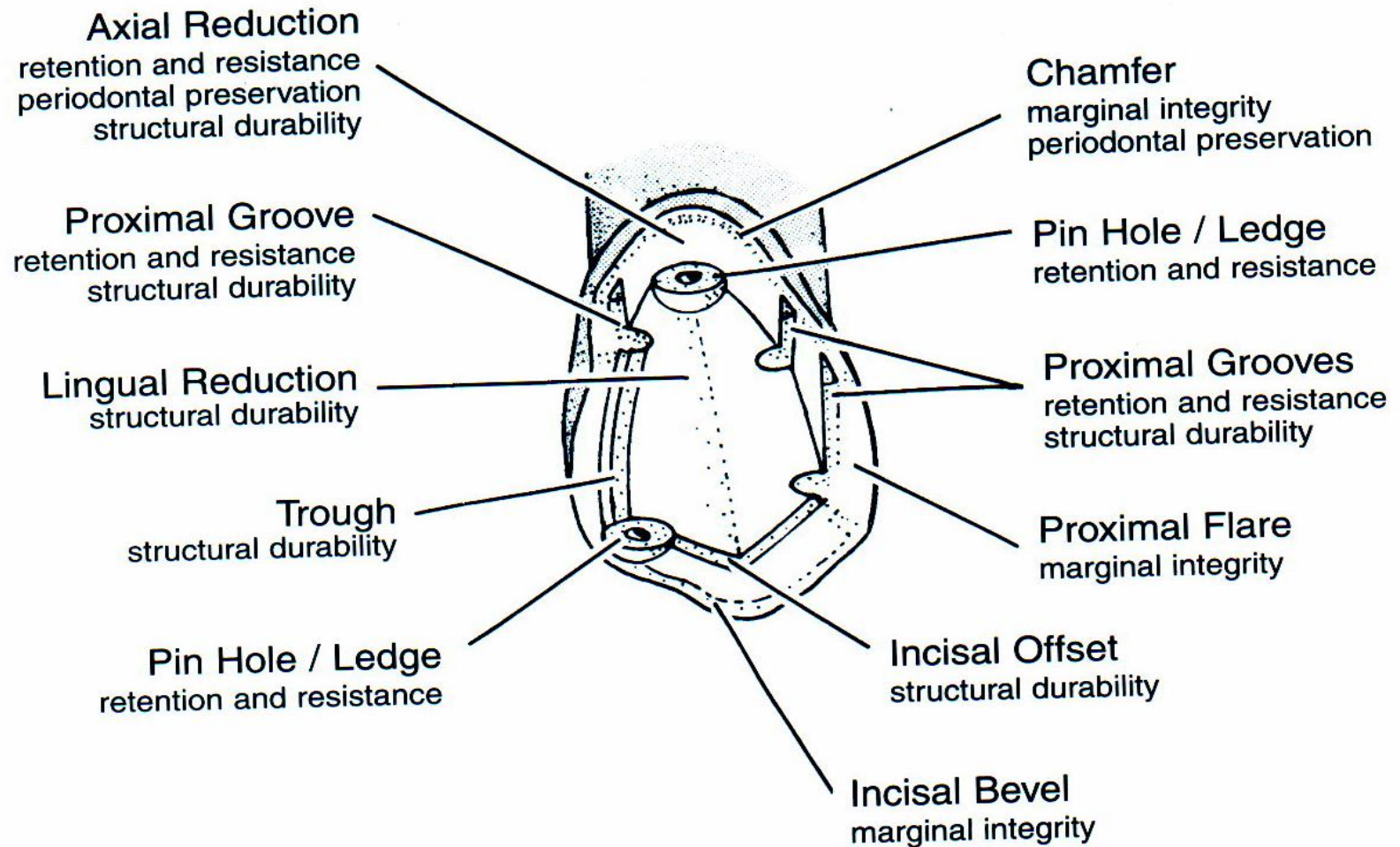


- ❑ Uses pins (2 incisal and 1-2 cervical) for retention
- ❑ Uses ledges and indentations for resistance form
- ❑ Good esthetics with minimal display of metal
- ❑ Requires a skillful operator to perform
- ❑ Protects the incisal edge from attrition
- ❑ Used as a splint for upper anterior teeth
- ❑ Pin holes are 2 mm in depth, 0.3-0.5 mm in width
- ❑ Pins are prepared with a small pilot round bur, followed by a small cylindrical stone
- ❑ Pins must be parallel to each other
- ❑ The ledge joins the pin holes

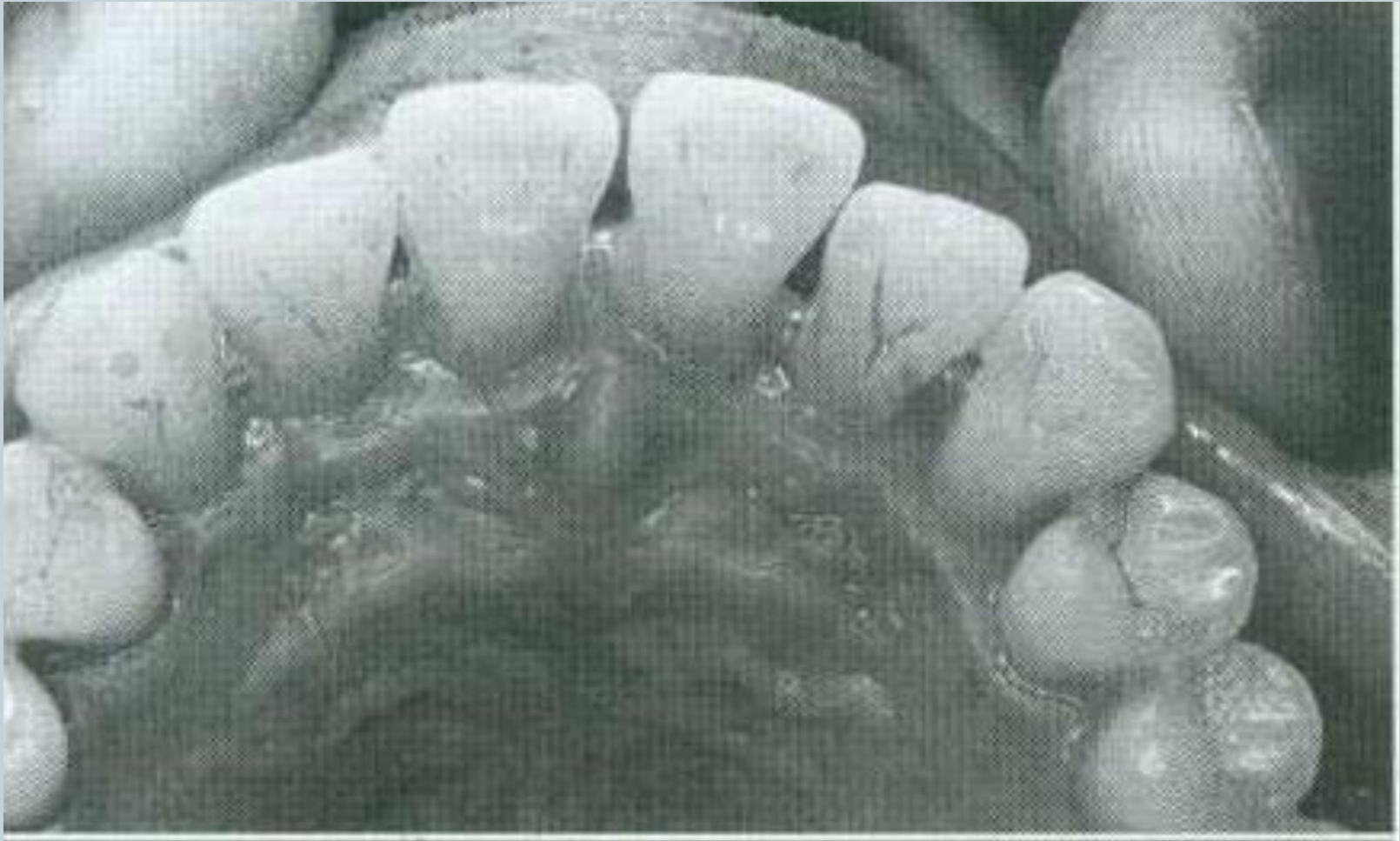
Prep of anterior teeth



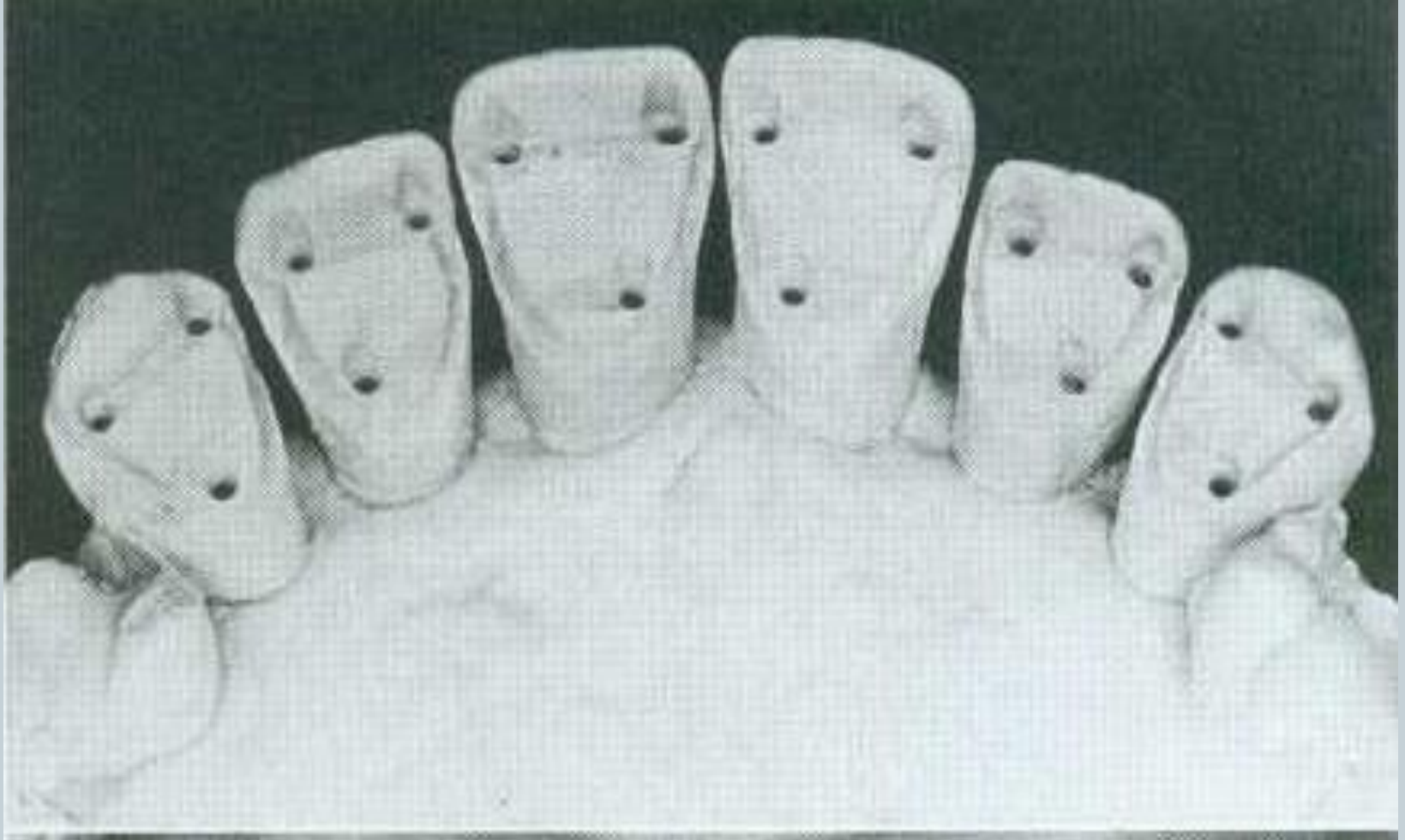
Pin ledge with modified grooves



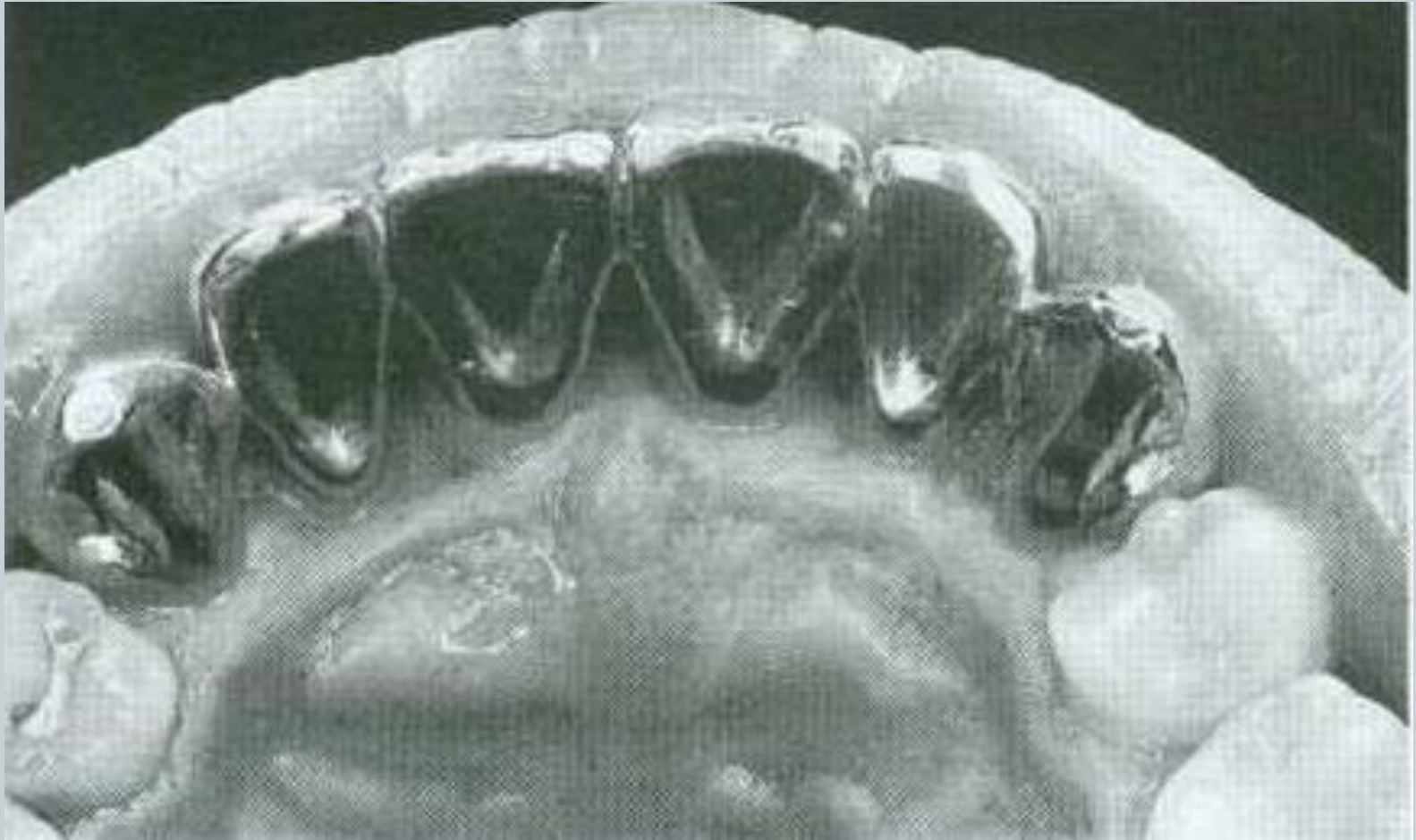
Periodontally loose anterior teeth



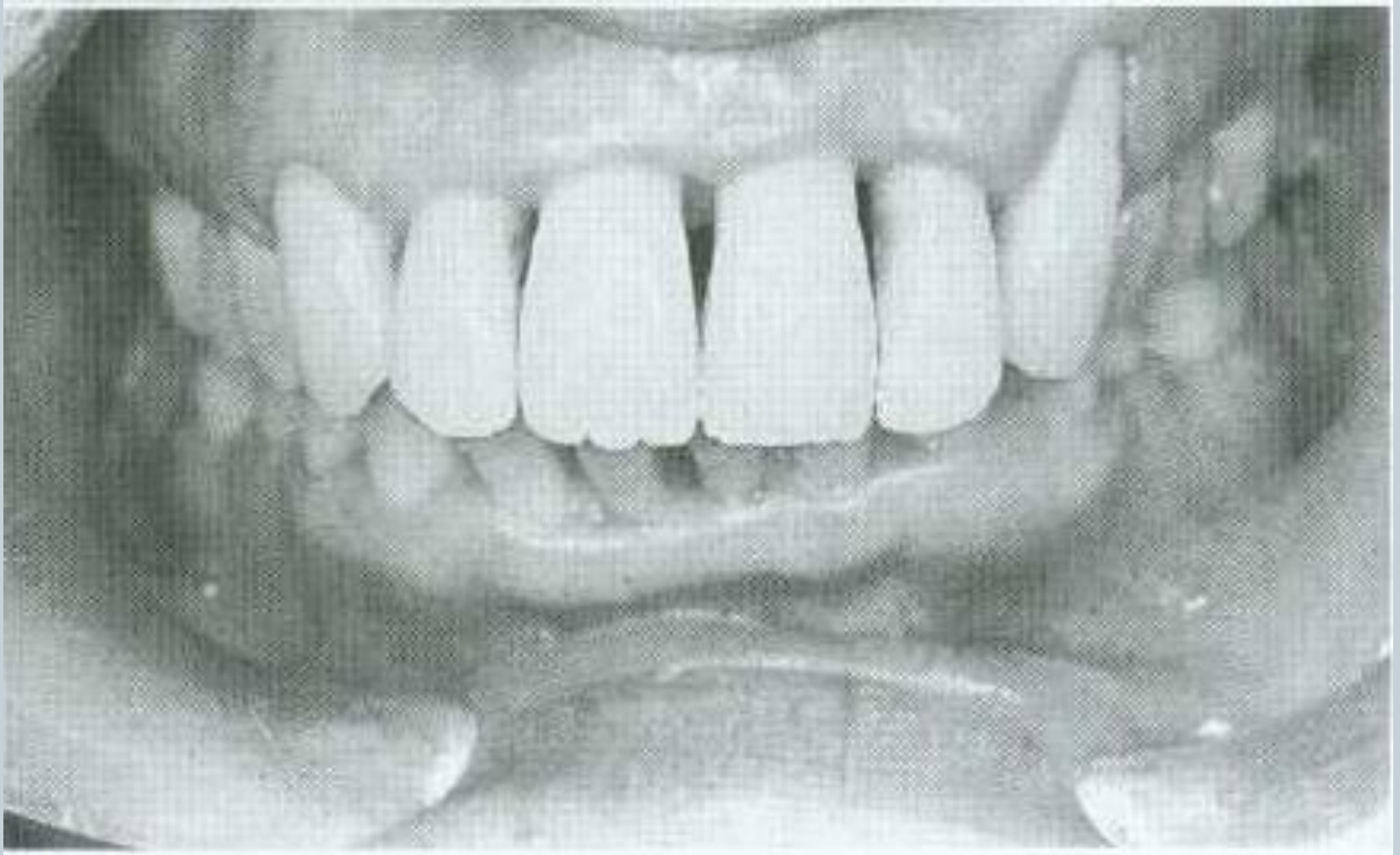
Completed preparation



Cemented restoration



Splinted teeth (no metal display)



Seven-Eight Crown



- ❑ Modification of the $\frac{3}{4}$
- ❑ Covers all the tooth surfaces except the MB cusp
- ❑ Has proximal grooves and a buccal groove

Clinical picture of 7/8 crown

